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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,925	05/23/2001	Pentti Juhani Eromaki	4447-59072	1687

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,925

Applicant(s)

EROMAKI, PENTTI JUHANI

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 4-9 and 25-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-24 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 3, 13-14, 18-19, 23-24 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the description of the angle being "in relation to one of a constant or local row direction" is confusing.

In claims 13, 18 and 19, --one of-- should be deleted in view of the use of "or".

In claims 13 and 14, the description of the curvature being of an angle is ambiguous since a curve (unlike a straight section) fails to define a single angle.

As to claim 19, it is unclear if "at least half" in claim 19 broadens at most five times in claim 1.

As to claim 23, it is unclear if (1) a tread is being claimed (as indicated by the preamble) or (2) a tire is being claimed (as indicated by the description of "tread layer on a tire carcass" (emphasis added)).

- 3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

- 4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan '413

5) Claims 1-3, 10-24 and 31 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japan '413 (JP 2000-289413).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Japan '413 discloses a tire having a size such as 185 / 65R 14 and thereby discloses the subject matter of a rubber tread and a tire carcass. The tread comprises blocks separated by circumferential and transverse grooves. In figure 9, each block has a multitude of sipes wherein each sipe is Z-shaped and thereby has two bend points. Since the z-shaped sipes are closely spaced and arranged in a row, the z-shaped sipes form webs and nubs as claimed. Japan '413 teaches that the gap between the sipes is 1.5 to 4.5 mm. As to claims 1-3, 10-24 and 31, the claimed tire is anticipated by the tire of Japan '413. In any event: As to claims 1, 18-24 and 31, it would have been obvious to arranged the z-shaped sipes to define webs and nubs such that the width of the webs (gap between the sipes) is at most five times the width of sipes since (a) Japan '413 suggests arranging closely z-shaped sipes in a row such that the gap between the sipes is 1.5 mm to 4.5 mm and (b) it is well known in the tread art that sipes (an art recognized term) may have a width of 0 to 2mm. The description regarding surface tear

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points (claim 1), tear depth (claim 18), decreasing measure (claim 22), surface tear points and decreasing nub height (claim 23) fail to define tread structure (sipe width / sipe spacing) different from that disclosed / suggested by Japan '413.

With respect to claims 2 and 3, the claimed first type slit clearly reads on the z-shaped sipes.

As to claims 10-12, note the illustrated shape of the sipes and the arrangement of the sipes in a row.

As to claims 13-14, Japan '413 teaches curved or angled bends. In any event: It would have been obvious to shape the sipes such that each bend is curved so as to define arcs each having a radius of curvature since it is taken as well known / conventional per se to use curved bends as an alternative to angled bends in a sipe - (i.e. provide an undulating sipe with curved peaks (a wavy sipe thereby defined) instead of angled peaks (a zig-zag sipe) thereby being defined.

As to claim 15, the block, which has a circumferential edge, has z-shaped sipes which open to the circumferential groove.

As to claim 16, Japan '413 teaches forming a multitude of nubs. In any event, it would have been obvious to provide at least five nubs as claimed depending on the desired size of the block since Japan '413 teaches arranging the sipes densely in the block center section.

As to claim 17, note that each row of sipes is illustrated as being at angle acute angle to the circumferential direction.

Japan '710

6) **Claims 1-3, 10-24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '710 (JP 7-40710) in view of Caretta (US 6382283) and optionally Japan '418 (JP 8-244418).**

Japan '710 discloses a tire having a size such as 205/55R16 and thereby discloses the subject matter of a rubber tread and a tire carcass. The tread comprises blocks separated by circumferential and transverse grooves. In figure 11, each block has a multitude of sipes wherein each sipe is s-shaped and thereby has two bend points. Since the s-shaped sipes are closely spaced and arranged in a row, the s-shaped sipes form webs and nubs as claimed. As can be seen from figure 11, the width of the web (a transverse gap between the sipes which is equal to the distance between bend of one s-shaped sipe and end of another s-shaped sipe) is substantially less than the width between the sipes in the circumferential direction A. Japan '413 is silent as to the width of the sipes and the width of the web.

As to claims 1-3, 10-24 and 31, it would have been obvious to arranged the s-shaped sipes of Japan '710 such that the width of the webs (transverse gap between the sipes) is at most five times the width of sipes since (a) Japan '710 suggests closely arranging s-shaped sipes in a row such that width of the transverse gap between the end of one sipe and the bend of the next sipe is substantially less than the circumferential spacing of the sipes, (b) Caretta suggests spacing sipes having a width of less than 0.5 mm by a distance of D3 of 3-6 mm so that the flexible rubber portions between the sipes may deform so as to define gripping edges 10a (figure 3) and

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optionally (c) Japan '418 teaches spacing sipes such that sipes have a width of for example 0.5 mm and define microblocks (a type of nub) having a size of 4mm so as to increase frictional force by increasing the edge component in the block . The description regarding surface tear points (claim 1), tear depth (claim 18), decreasing measure (claim 22), surface tear points and decreasing nub height (claim 23) fail to define tread structure (sipe width / sipe spacing) different from that suggested by the above applied prior art.

With respect to claims 2 and 3, the claimed first type slit clearly reads on the s-shaped sipes.

As to claims 10-12, note the illustrated shape of the s-shaped sipes and the arrangement of the s-shaped sipes in a row.

As to claims 13-14, it would have been obvious to shape the s-shaped sipes such that each bend is curved so as to define arcs each having a radius of curvature since Japan '710 suggests using either curved bends or angled bends.

As to claim 15, Japan '710 suggests opening sipes to the circumferential groove,

As to claim 16, it would have been obvious to provide at least five nubs as claimed depending on the desired increase in edge component since Japan '710 and Caretta teach arranging plural sipes in each block and optionally Japan '418's suggestion to use sipes to form a multitude of microblocks (a type of nub).

As to claim 17, it would have been obvious to orient the row of sipes at the claimed angle of 45-90 degrees to the circumferential direction in view of Japan '710's

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teaching to use sipes which are parallel to the transverse grooves which are inclined at an acute angle to the circumferential direction.

Remarks

7) Applicant's election of species #1 claims 1-3, 10-24 and 31 in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant is requested to provide a copy of Finland 20001234 since a copy of that reference has not been received.

The remaining references are of interest. Japan '807 is of interest for figure 4. Yamaguchi et al (US 5176765) is of interest for the discussion of sipes at column 10.

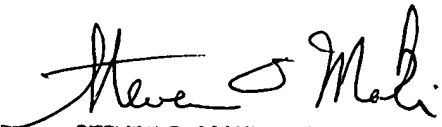
8) No claim is allowed.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
October 19, 2003


STEVEN D. MAKI 10-19-03
PRIMARY EXAMINER
~~GROUP 1300~~
A U 1733